CELL BIOLOGY AND CANCER		
South Carolina Science Academic Standards – Biology		
Activity	**Standard**	**Indicator**
3, 4	**B-1.1**	Generate hypotheses based on credible, accurate, and relevant sources of scientific information.
3, 4	**B-1.2**	Use appropriate laboratory apparatuses, technology, and techniques safely and accurately when conducting a scientific investigation.
3, 4	**B-1.3**	Use scientific instruments to record measurement data in appropriate metric units that reflect the precision and accuracy of each particular instrument.
3, 4	**B-1.4**	Design a scientific investigation with appropriate methods of control to test a hypothesis (including independent and dependent variables), and evaluate the designs of sample investigations.
3, 4	**B-1.5**	Organize and interpret the data from a controlled scientific investigation by using mathematics, graphs, models, and/or technology.
3, 4	**B-1.6**	Evaluate the results of a controlled scientific investigation in terms of whether they refute or verify the hypothesis.
3, 4	**B-1.9**	Use appropriate safety procedures when conducting investigations.
2	**B-2.6**	Summarize the characteristics of the cell cycle: interphase (called G1, S, G2); the phases of mitosis (called prophase, metaphase, anaphase, and telophase); and plant and animal cytokinesis.
2, 3	**B-2.7**	Summarize how cell regulation controls and coordinates cell growth and division and allows cells to respond to the environment, and recognize the consequences of uncontrolled cell division.
2	**B-2.8**	Explain the factors that affect the rates of biochemical reactions (including pH, temperature, and the role of enzymes as catalysts).
2, 3	**B-4.2**	Summarize the relationship among DNA, genes, and chromosomes.
2	**B-4.3**	Explain how DNA functions as the code of life and the blueprint for proteins.
2, 3	**B-4.8**	Compare the consequences of mutations in body cells with those in gametes.
3	**B-4.9**	Exemplify ways that introduce new genetic characteristics into an organism or a population by applying the principles of modern genetics.
3	**B-5.4**	Explain how genetic variability and environmental factors lead to biological evolution.

South Carolina Mathematics Academic Standards – Grades 9 - 12		
Number and Operations		
Activity	**Standard**	**Expectation**
3	**I.A.1**	Read, write, and represent very large and very small numbers in a variety of forms including exponential and radical.
1, 3	**III.A.1**	Given a problem situation, determine whether to use a rough estimate, an approximation, or an exact answer. Select a suitable method of computing from techniques such as the use of mental mathematics, paper and pencil computations, calculators, and computers.
1, 3	**III.B.1**	Explain why a solution is mathematically reasonable using supporting data.
Algebra		
1, 3, 4	**I.B.1**	Gather and record data, or use data sets, to determine functional (systematic) relationships between quantities.
1, 3	**I.B.3**	Interpret situations in terms of given graphs and create situations that fit given graphs.
3	**III.B.4**	Analyze data and represent situations involving exponential growth and decay using concrete models, tables, graphs, or algebraic methods as well as computer algebra systems, spreadsheets, and graphing calculators.
1, 3	**III.C.1**	Verify and explain the conclusion based on the data and the processes used.
Data Analysis and Probability		
1, 3	**I.A.1**	Distinguish among surveys, observational studies, and controlled experiments and evaluate the quality of each.
1, 3	**I.A.2**	Evaluate the legitimacy of conclusions about the population based on the sample(s) studied.
3, 4	**I.B.1**	Identify two or more experimental treatments (or conditions) to be compared and the sources of variation to be controlled.
4	**I.B.2**	Compare the responses of a group that gets treatment with those of a control group that does not.
3, 4	**I.B.3**	Given a problem situation, describe the basic principles of experimental design (control, randomization, and replication).
3, 4	**I.B.4**	Given a problem situation, evaluate whether conclusions drawn are based on randomization and control.
2, 3, 4	**I.C.2**	Given a problem situation, distinguish between independent/explanatory and dependent/response variables.

1, 3	**I.D.1**	Represent, display, and interpret data using scatterplots, bar graphs, stem-and-leaf plots, and box-and-whiskers diagrams including representations on graphing calculators and computers.
3	**III.A.1**	Conduct simulations to collect random sample statistics and examine the variability of them from a known population.
1, 3	**III.C.2**	Given a published report based on data, interpret the results.
South Carolina Language Arts Academic Standards – English I & 2		
Activity	**Standard**	**Indicator**
1, 2, 3	**E1-R1.2** **E2-R1.2**	Demonstrate the ability to make connections between a text read independently and his or her prior knowledge, other texts, and the world.
All activities	**E1-R1.8** **E2-R1.8**	Demonstrate the ability to draw conclusions and make inferences.
1, 2, 3	**E1-R3.2** **E2-R3.2**	Demonstrate the ability to use context analysis to determine the meanings of unfamiliar and multiple-meaning words.
All activities	**E1-W1.3** **E2-W1.3**	Demonstrate the ability to develop an extended response around a central idea, using relevant supporting details.
2, 3, 4, 5	**E1-W1.6.1** **E2-W1.6.1**	Demonstrate the ability to write multiple-paragraph compositions, friendly letters, and expressive and informational pieces.
All activities	**E1-W2.1** **E2-W2.1**	Demonstrate the ability to use writing to explain and inform.
1, 4	**E1-W2.2** **E2-W2.2**	Demonstrate the ability to use writing to learn, entertain, and describe.
1, 2, 4, 5	**E1-W3.1** **E2-W3.1**	Demonstrate the ability to respond to texts both orally and in writing.
All activities	**E1-W3.3** **E2-W3.3**	Demonstrate the ability to use texts to make connections and to support ideas in his or her own writing.
All activities	**E1-W4.1** **E2-W4.1**	Demonstrate the ability to write legibly using print or cursive handwriting.
All activities	**E1-C1.7** **E2-C1.7**	Demonstrate the ability to participate and respond appropriately in conversations, discussions, speeches, and debates.

1, 2, 3	**E1-C1.12** **E2-C1.12**	Demonstrate the ability to formulate appropriate oral responses by using accurate and detailed references to texts.
All activities	**E1-C2.3** **E2-C2.3**	Demonstrate the ability to make predictions, to distinguish between fact and opinion, to compare and contrast information and ideas, and to make inferences with regard to what he or she has heard.
4, 5	**E1-C3.1** **E2-C3.1**	Demonstrate the ability to analyze and evaluate the effectiveness of the techniques used in nonprint sources for a particular audience.
2, 4, 5	**E1-C3.4** **E2-C3.4**	Demonstrate the ability to make predictions, to distinguish between fact and opinion, to compare and contrast information and ideas, and to make inferences with regard to what he or she has viewed.
2, 4, 5	**E1-C3.8** **E2-C3.8**	Demonstrate the ability to make connections between nonprint sources and his or her prior knowledge, other sources, and the world.
3, 4	**E1-RS1.1** **E2-RS1.1**	Demonstrate the ability to ask questions to guide his or her research inquiry.
2, 3, 4, 5	**E1-RS1.2** **E2-RS1.2**	Demonstrate the ability to ask questions to investigate all aspects of a topic, including various viewpoints regarding it.
2, 3, 4, 5	**E1-RS3.1** **E2-RS3.1**	Demonstrate the ability to synthesize information from a variety of sources, including those accessed through the use of technology.
South Carolina Health Lifetime Wellness Standards – Grades 9 - 12		
Activity	**Standard**	**Indicator**
1, 2, 4, 5	**I.1.a**	Evaluate risk relationships between healthy lifestyle behaviors and disease prevention.
5	**I.1.b**	Analyze strategies for detection and treatment of communicable and chronic diseases.
5	**I.1.c**	Evaluate the risks and benefits of personal health practices.
2, 3, 4, 5	**I.2.a**	Evaluate the validity of health information, products, and services from community agency, technology (Internet), and mass media sources.
5	**I.4.b**	Describe how public health policies and government regulations influence health promotion and disease prevention.
2, 5	**I.4.c**	Analyze how research, technology, and medical advances influence the prevention and control of health problems.
5	**I.6.a**	Demonstrate the ability to use various strategies when making decisions related to health needs.

5	**I.7.b**	Demonstrate the ability to adapt health messages and communication techniques to the characteristics of a particular audience.
5	**I.7.c**	Analyze community strategies for preventing or reducing the spread of disease.
5	**III.6.d**	Demonstrate the ability to apply a decision-making process to health issues and problems, both individually and collaboratively.
5	**III.7.a**	Demonstrate the ability to influence and support others in making positive health choices.
5	**IV.1.b**	Analyze the short- and long-term results of safe, risky, and harmful behaviors.